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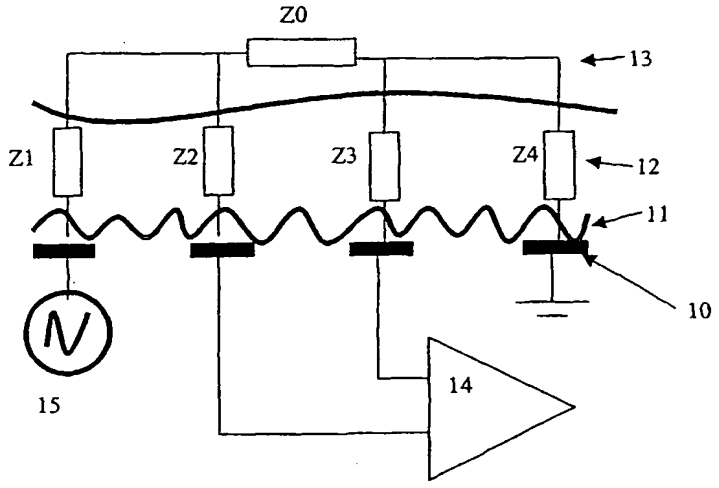
(54) Title: LIVE FINGER DETECTION BY FOUR-POINT MEASUREMENT OF COMPLEX IMPEDANCE




(57) Abstract: Method and sensor assembly determining the condition of a structure, especially for confirming if a measured fingerprint is on a live finger, by measuring characteristics of close to the structure surface, the sensor comprising a first pair of current supply electrodes coupled to a current source, providing an electrical current to the skin, at least two pickup electrodes at chosen and different positions relative to the current supply electrodes, at least a first of said pickup electrodes being coupled to an instrument for measuring the voltage between said first pickup electrode and at least one of the pickup or current supply electrodes, storage means for a predetermined set of values characterizing a certain condition of the surface, and means for comparing the characteristics from each pickup electrode with the measurements of the other pickup electrodes and with the predetermined set of characteristics for determining the surface condition.

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